DOCUMENT RESUME

ED 094 715 IR 000 911

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TITLE	Doctoral Program in Audio-Visual Communication Research. Final Report.
INSTITUTION	Indiana Univ., Bloomington. Audio-Visual Center.
SPONS AGENCY	National Center for Educational Communication (DHEW/NIE), Washington, D.C.
BUREAU NO	BR-7-0535
PUB DATE	Jan 74
GRANT	OEG-0-72-4744
NOTE	26p.; Graduate Educational Research Fellowship Training Program
EDRS PRICE	MF-$0.75 HC-$1.85 PLUS POSTAGE
DESCRIPTORS	Audiovisual Centers; *Audiovisual Communication; Audiovisual Programs; *Doctoral Programs; *Educational Programs; Educational Theories; Graduate Study; *Media Research; Media Specialists; *Program Descriptions
IDENTIFIERS	Indiana University

ABSTRACT

Program objectives may be summarized as follows: (1) to provide an opportunity for outstanding students to become trained in research through participation in a doctoral program having a special emphasis on audiovisual communication; (2) to produce persons trained in the research skills that are essential for the development, implementation, and evaluation of instructional systems and materials; (3) to produce graduates who are prepared to conduct research, participate in research and development programs, and direct and train others engaged in such activities: and (4) to ensure that each student becomes personally involved with one or more faculty members in designing and conducting carefully controlled, theoretically based research on problems significant to instnuctional development and communications. To accomplish the objectives, trainees were required to take courses in behavioral science content and methodology; research design; techniques of measurement, quantitative analysis, system design and analysis, and computer utilization. Program success was due in part to staff capabilities, the high caliber of student participation, and the individualized practicum experiences. (WCM)

ED 094715

Grant No. OEG-0-72-4744
Project No. 7-0535

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GRADUATE EDUCATIONAL RESEARCH FELLOWSHIP TRAINING PROGRAM

"Doctoral Program in Audio-Visual Communication Research"
Indiana University

FINAL TECHNICAL REPORT

January 1974

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Indiana University
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IR 000 911

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Doctoral Program in Audio-Visual Communication Research

FINAL REPORT

1. a. Objectives

Our program objectives may be summarized as follows:

(1) To provide an opportunity for outstanding students to become trained in research through participation in a doctoral program having a special emphasis on audio-visual communication.

(2) To produce persons trained in the research skills that are essential for the development, implementation, and evaluation of instructional systems and materials.

(3) To produce graduates who are "prepared to conduct research, participate in research and development programs, and direct and train others engaged in such activities.

(4) To ensure that each student becomes personally involved with one or more faculty members in designing and conducting carefully controlled, theoretically based research on problems significant to instructional development and communication.

There is nothing about the objectives of our educational research training program that I would change if I were to direct another similar program. I believe that the objectives, as set forth in our proposals and progress reports, were clear, reasonable and feasible, and that the program largely succeeded in accomplishing them.

b. Content

To accomplish the above objectives, the trainees were required to take a series of courses which would provide foundations in behavioral science content and methodology, research design, and techniques of measurement and quantitative analysis. Specialized training was also provided in systems design and analysis and in computer utilization. These skills were then brought to bear in laboratory, practicum and internship contexts, and focused on problems in instructional development and instructional communication.

Initially, major emphasis was placed on behavioral-science type courses taken in other departments of the University, such as the Department of Psychology. While the program continued throughout to include training in behavioral science content and methodology, it was decided during the course of the program to place greater emphasis on areas more directly relevant to instructional problems. During the last two years, each fellow was encouraged, along with his general research training, to specialize in an area within our own Division of Instructional Systems Technology, such as Instructional Development, Message Design, Systems Design and Management or Diffusion and Adoption. This provided a greater degree of research specialization in an area more closely related to instructional problems.

An important feature of the program, since its inception, was the fact that there was not a single, rigid sequence of courses that had to be taken by each member of the fellowship program. Instead, there were specified areas or categories of courses in which a minimum number of hours was required. The specific courses which a particular

student took within each of these basic areas were adjusted in accordance with his prior background, interests, needs and career objectives. This gave the program a great deal of flexibility, and permitted its content to be, to a large extent, tailor-made for each trainee. With regard to the length of the program, I believe that three years was the optimal time period. Most of the trainees were able to finish their doctoral programs, or at least their coursework, in this amount of time.

c. Staff

The ratio of faculty members involved in the program to the number of trainees was always high. The largest numbers of fellows, during the six years that the program was in effect at Indiana University, was seven. During the last half of that period, there were no more than five fellows at any one time. The number of faculty members directly involved in the training program ranged from five to seven. All of these devoted only part of their time (10-25 percent) to the program. No consultants were involved in the program. However, a large number of faculty members in other departments of the University assisted, directly or indirectly, in the training of the fellows through the regular courses which they offered, through individual reading courses, and through providing practicum, internship, and assistantship opportunities.

d. Trainees

The initial screening criteria were:

(1) Previous academic record, including scholarship, breadth of interests, evidence of special aptitude for scientific research (e.g., performance in math and science courses);

minimum of 3.5 grade point average in major area and 3.0 overall average.

(2) Recommendations of persons who had guided the candidate's previous research experience.

(3) GRE test scores; placement in top third of students in the Division's graduate program.

(4) Miller Analogies test score, when available; minimum score of 60.

In addition to the above four primary criteria, several other factors which have been found to be highly correlated with educational research productivity were also taken into account. Thus, preference was given to applicants meeting the above criteria who also:

(5) were young enough to finish the doctorate by their early thirties.

(6) had no more than two or three years of teaching.

(7) had some pre-doctoral training from a university offering research-oriented doctoral degrees.

(8) had majored in the behavioral sciences or other disciplinary areas emphasizing relative functional skills rather than content areas of teaching.

(9) had made an early decision to undertake doctoral studies, typically before entering graduate school.

(10) had participated at a professional level as a research assistant or research associate in a research organization.

(11) had published prior to receipt of doctorate.

In my opinion, the selection criteria were highly satisfactory, and the program succeeded in recruiting an exceptionally able and

qualified group of trainees. (See section 1e below.) Our experience with the program bears out the relationship between research productivity and the variables enumerated in 5 through 11 above. In other words, there did seem to be a direct relationship between the relative success and productivity of the trainees and the extent to which they possessed the specified qualities.

With regard to geographical distribution, the fellows came from a number of states, including California, Indiana, Kentucky, Maryland, Massachusetts, Michigan, New York, and Washington, D.C. Some of the fellows were Jewish, but there was no other ethnic minority participation. The reason for this was that no persons from other ethnic minority groups applied for the program.

The trainees were different in some respects from other participants in our program. They were slightly younger, on the average, since most of our regular graduate students have had a number of years of teaching experience before entering the program. The fellows were much more interested in research and tended to have had more research experience than our typical students. They also had more previous coursework in the behavioral sciences. In selecting jobs, the fellows tended to accept positions in institutions of higher education rather than in public school systems. Most of them took positions which involved educational research.

e. Effects of Federal support

I believe that the Federal support for the trainees benefited our program in a number of ways. It enabled us to bring into our program a number of extremely bright, inquiry-oriented young people whose interest

in research and theory affected not only our curriculum but the attitudes of our faculty and students as well.

During the years in which the fellowship program was in operation, a considerable amount of work was done on the development and reorganization of our curriculum. Earlier courses were improved and new courses were initiated, some on an exploratory basis. Much of this course development, and in particular the increased emphasis on research-oriented courses, was a direct result of the research training fellowship program. We now have a research sequence of several courses, which is required for all students working toward the doctorate degree. Several of the new courses were developed jointly by faculty members and one or more of the research fellows. I believe that the presence of the fellows also heightened the faculty's interest in research questions, and a number of research studies were carried out by the fellows, working with, or under the supervision of, faculty members. This aspect of the program is spelled out more fully in the following section.

2. Major strengths and unique features of the program

Among the strengths of the program were the diversity of staff capabilities (as described in earlier reports), the high caliber of the student participants, the excellent research facilities available at Indiana University, the highly interdisciplinary nature of the training program, and, perhaps most important, the variety of practicum experiences that were provided for the fellows.

The practicum portion of the fellowship training program was highly individualized, and was aimed at providing each student with the type of research experiences which he and the faculty felt would be of most value

to him in the light of his particular abilities, interests, and career objectives. Each trainee was involved to some degree in each of the following types of activities which were regarded as part of the overall practicum experience:

a. Research conducted jointly with a faculty member

The location of the trainees for practicum or research-experience activities varied greatly and depended primarily upon the particular field of interest of each trainee. For example, trainees who were interested parimarily in learner variables participated in research conducted or supervised by faculty members who are psychologists (in the Audio-Visual Research Department, the Department of Educational Psychology, or the Department of Psychology).

Trainees interested in research dissemination and utilization worked with faculty members in the Diffusion and Adoption program in the Audio-Visual Center, and in the Information Science program of the Graduate Library School. One of these trainees also worked on the information storage and retrieval system of Phi Delta Kappa.

Several trainees worked on projects in Special Education, and two of them served as Research Associates in the R&D Center in Special Education at Indiana University. One trainee, who was interested primarily in visual perception and message design, participated in research with faculty members in the Message Design program of the Audio-Visual Center and in the School of Optometry. Another trainee who was primarily interested in Instructional Development, engaged in research projects with our faculty members in this area.

b. Individual student research projects

After a trainee gained experience through working on research projects with faculty members, he was encouraged to initiate and conduct research studies of his own. All of the trainees were engaged in independent research studies. Two of the trainees were awarded research grants under the Small Grants Program of USOE.

c. Development and teaching of new research-oriented courses

Four of the trainees participated with Dr. Harvey Black in the development of a new laboratory course in audio-visual communications, and all four of these students actually took part in the teaching of the course. Their responsibilities included planning and supervising individual research projects conducted by students enrolled in the course, development of the concept and materials used in the course, and evaluation and modification. A report on this work was written up by three of the trainees and presented as a paper at the March 1970 meeting of the American Educational Research Association.

Two other trainees helped to develop and assisted in the teaching of a new graduate-level course in communications entitled "The Learner, Media and Research." This course was designed by the trainees to supply research techniques to students in other areas of audio-visual communication, particularly Instructional Development, in an effort to integrate research training with training in the development of instructional materials. Another of the trainees, who obtained unique training from the School of Optometry and in the areas of physiology and visual perception, helped to develop an experimental research course entitled "Perception, Vision and Message Design."

d. Supervision of other students' research

After the trainee had gained research experience through participating in faculty research projects and through carrying out research studies of his own under the guidance of a faculty member, he was encouraged to further develop his research skills by supervising the work of less experienced students. This type of responsibility which was assumed by the more advanced students in the program, was found to be very beneficial to the fellowship students themselves and also to other students enrolled in the program. A number of the fellows commented on the value of this type of interaction with other students, not only in the application of research techniques which they have learned but also in the generation of research ideas.

3. Weaknesses or difficulties

The only serious difficulty with the program seemed to be the question of finances. Several of the trainees were married, and some of them had one or more children. The stipends provided by the program were inadequate to meet the fellows' living expenses, and this was in some cases detrimental to their morale. The fellowship rules prevented them from holding other jobs, and some of them had to choose between going deeply into debt or living at a bare subsistence level in order to complete their studies.

Another problem was the limitation on the duration of fellowship support for each student. Unless our students have already taken some graduate work, three years are usually needed to complete all of the course requirements for the doctorate, including the "educational foundation" courses, inside and outside minors, language requirement, tool skills, etc. Thus, the fellowship support often terminated about the time the trainee had completed his

coursework. Several of the trainees had to find jobs before they could complete their dissertations and obtain their degrees. In the case of the participants who still have not completed their degrees, it is largely due to the fact that they accepted demanding, full-time positions prior to completing the dissertation.

One factor which delayed the completion of the fellows' coursework was the limitation which the University had to impose upon the number of credit hours that fellowship students could take each year. The substantial rise in tuition at the University was not accompanied by an increase in the institutional support provided by the program. The institutional support was actually inadequate to cover the cost of the program to the University. During the last few years of the program, the fellows had to be limited to 30 hours of coursework per year and thus their time was under-utilized, especially during the summer. Although they were often productive in other ways during summers (such as in carrying out research projects), they were losing time with respect to completing their coursework toward their degrees.

4. Overall evaluation of the program

On the whole, I believe that the Educational Research Training Program was extremely successful. Students of a high caliber were attracted to the program, and most of them felt that the experience was very valuable and that they learned a great deal through their traineeship.

Very little difficulty was encountered in placing the trainees in jobs in which their training could be utilized. As the attached table shows, many of them have taken positions in colleges and universities. Institutions which have employed graduates of the program include Michigan State University,

NAME	DATES	FIELD	DEGREE	DEGREE DATE	POSITION
Anderson, Charles	1969-72	IST-Research	Ed.D.	1973	Media Services Director Western Kentucky University
Anderson, J. Warren	1969-71	IST-Research	Ed.D.	1974	Developer, GMERAD Michigan State University
Berry, Gordon	1968-69	IST-Research	Ed.D.	1974	Instructional TV Director Central Missouri State Univ.
Carsman, Mark	1967-70	IST-Research (Diffusion)	Ph.D.	1971	Senior Designer, Equitable Life Insurance Society, New York, New York
Clark, Richard E.	1969-70	IST-Research	Ed.D.	1970	Associate Professor Univ. of California, Davis and Sacramento State
Dickinson, Jay H.	1967-70	IST-Research	Ed.D.	1974(?)	Assistant Professor and Audio Supervisor, Boise State College, Idaho
Eaglestein, Solomon	1967-70	IST-Research	M.A.	1970	Assistant Professor Teachers College, Columbia University, New York
Gaither, V. Roger	1968-69	IST-Production			Assistant Professor Appalachian State University North Carolina
Gold, James	1969-71	IST-Research	Ph.D.	1974(?)	Wisconsin Department of Public Instruction
Johnson, Dale	1970-73	IST-Research	Ph.D.	1974	Research Associate, Center for Innovations in Teaching the Handicapped, Indiana University
Kern, Lee	1967-68				
Lawrence, Stanley	1968-69 1970-71	IST-Research			

NAME	DATES	FIELD	DEGREE	DEGREE DATE	POSITION
Levie, Diane	1970-73	IST-Research	Ph.D.	1974	Co-Investigator, USOE-sponsored grant, Indiana University
Mulvaney, Dallas	1970-73	IST-Research	Ph.D.	1974	Instructor, IUPUI
Ormiston, Michael	1968-71	IST-Research	Ph.D.	1974(?)	Regional Vocational Training Center, Fort Wayne, Indiana
Pelz, William	1967-68		M.A.		
Taylor, Arthur M.	1967-70	IST-Research	Ph.D.	1974(?)	R & D Center, University of Minnesota
Taylor, Robert W.	1967-70	IST-Research	Ph.D.	1970	Assistant Professor Syracuse University, New York
Waggener, Joseph	1970-73	IST-Research	Ed.D.	1973	Post Doctoral Fellow Miami University, Ohio

the University of California, the University of Minnesota, Miami University, Purdue University, and Indiana University.

Excellent cooperation among faculty members, and between faculty members and the trainees, helped to make the program a success. Other important factors in the success of the program were the interdisciplinary nature of the curriculum, and the high degree of flexibility which allowed each participant to select courses especially suited to his needs and interests.

It is felt that the practicum activities arranged for the students were especially successful. All of the trainees participated in fruitful research studies, either on a joint basis with members of the faculty or on an individual basis, under a faculty member's guidance. In all cases, the trainees were able to work with faculty members who specialized in the particular research areas in which the students were interested.

The faculty members who worked with the students in this phase of the program represented a wide range of disciplines and departments. Within our own Division, the trainees worked not only with members of the Research Department, but also specialists in instructional development, instructional materials production, message design, educational television, systems design, and the diffusion and adoption of innovative practices. As mentioned previously, a number of faculty members in other departments of the University also cooperated in providing practicum experiences for the fellows. Within the School of Education, the trainees worked with persons in the Departments of Educational Psychology, Educational Research, and Special Education. Other trainees obtained their research experience in the Departments of Psychology, Mass Communications, Information Science, etc.

Valuable experience was gained by several fellows who used the facilities of the Research Computing Center, either in cooperative research with a

faculty member, or for their own independent research studies. Use was also made of the Mathematical Models Laboratory and the R&D Center in Special Education, where two of the trainees have served as research assistants.

Two of the trainees originally in the program vacated their fellowship appointments upon receipt of individual research grants for studies which they planned and submitted for funding. This not only opened slots for two new fellows, but also provided the recipients with invaluable experience in organizing, supervising and carrying out research studies, and provided training opportunities for other students who served as assistants on these projects.

Another type of activity of great value to the trainees was their participation in the development of the Division's curriculum. Three new research-oriented courses were a direct outgrowth of the fellows' initiative, planning, and intensive cooperation with interested faculty members. In addition to assisting faculty members in the teaching of these courses, the more advanced trainees also gained valuable experience in supervising the research studies of less advanced students enrolled in these and other courses.

The attached letters written by five of the trainees give their evaluation of the practicum arrangements and other aspects of the fellowship program.

5. Present plans and directions

As indicated previously, the curriculum of the Division of Instructional Systems Technology has been expanded to include a number of new research-oriented courses. In the past, DIST graduate students obtained much of their behavioral science and research training in other departments of the University, such as the Department of Psychology and the Department of Sociology,

or in other departments within the School of Education. For the most part, these courses were not oriented toward the kinds of research questions that arise in the area of instructional technology or educational media, which is the focus of this division.

In the past few years, however, the Division of Instructional Systems Technology has instituted a research sequence of its own, consisting of about five courses which are required for all doctoral students. These courses provide students with a background in instructional media research, as well as skills in research design and research techniques that are especially relevant in this area. Research skills are developed not only through reading and criticizing past research, but also through actual planning and carrying out of small-scale research projects dealing with various aspects of instructional technology.

Doctoral students are encouraged to select one specific area in our program to specialize in, instead of specializing in research in general. Thus, along with his general research training, the student can specialize, for example, in Instructional Development, Message Design, or Diffusion and Adoption of Innovations. This provides each student with a greater degree of research specialization, in an area more closely related to instructional problems.

One of the major new thrusts of our program has been the establishment of a specialized series of course offerings in Diffusion and Adoption. Five courses have been developed in this area, and three faculty members offer courses in diffusion (see attached brochure).

During the 1973-74 academic year, a total of 174 graduate students were enrolled in the Division. These include 62 doctoral students (on campus),

87 master's degree students, and 25 specialist degree students, in addition to a number of doctoral candidates who are employed elsewhere while completing their dissertations.

INDIANA UNIVERSITY
Audio-Visual Center
BLOOMINGTON, INDIANA 47401

AREA CODE 812
TEL. NO. 337-

Dear Dr. Jwaideh and Dr. Black:

In as much as I am now in my third and last year under the fellowship program, I would like to take this opportunity to evaluate the program as it has affected me.

It would seem to me that the greatest benefit from this program for me has come from the opportunity to choose from the faculty here at Indiana University, individuals whose interests paralled or supplemented my own. I personally have benefited most from coursework in memory and concept learning taken under Dr. Lloyd Peterson in psychology, statistical assistance from Dr. Joan Prentice in Educational Psychology, and discussion with and coursework taken under Dr. Redding in Optometry. These all helped me in developing research skills and a knowledge of my research emphasis area. These instructors are only a few of the many outstanding faculty members here at Indiana University from whom I have benefited.

Members of the Educational Media research faculty have helped me in many ways also. You have supported me through encouragement, assistance and guidance. You were flexible in assisting each of us to develop an area of interest and then helping us to find faculty with similar interests. This support permitted me not only to develop an interest area, but also to spend the time needed to gain a strong knowledge background, so critical before meaningful research can be conducted.

You also guided me to Dr. M. Fleming, of our department, who has been patiently guiding me and helping me as I conducted exploratory research and tried to understand the mechanisms and theories in my area of interest (perception).

My study of perception as an area needing further investigation in educational media has now led me to the point of competency adequate for the design of a course to be entitled "Perceptual Processes in Instructional Research and Development" to be taught byDr. Fleming with my assistance. The development of this course will permit me to gain experience as an instructor, develop a course which can be taught should I be employed at a university, and through further study and class interaction, determine topics in perception needing exploration. This hopefully would be undertaken by future students as well as myself.

There have been limitations in the program, as there will be in any such venture. This year has been one in which most of the limitations have been removed. I would hope that other students to follow us in the program will benefit even more than we did.

The opportunity it has afforded us has been a great one. Certainly in the three years we have been in it, we have only begun to be able to do meaningful research, and only taken a small sampling of the courses available here. Yet even with the relatively small amount we have so far accomplished, there is reason to hope that we are now ready to enter the field and make a significant contribution to it.

Thank you for this opportunity and your efforts toward making this program a success.

Sincerely,

Jay Dickinson

Jay Dickinson

INDIANA UNIVERSITY
Audio-Visual Center
BLOOMINGTON, INDIANA 47401

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Dear Professors Black and Jwaideh:

In the past I have expressed to you a number of criticisms and suggestions about the structure and focus of instructional experiences available to doctoral students in this department. Perhaps for that reason, I am particularly satisfied that you requested a letter from me describing my experience and opinion concerning the OE instructional technology research fellowship program. In my estimation it has been the most outstanding experience I have had in graduate school. The opportunities available to me as a research fellow have drastically altered by career plans in this field.

As you know, I returned for an advanced degree from a lucrative and responsible position in instructional media. My decision to return was based on my gradual recognition that I had very few methods available to me for designing instructional technology for effective use. I reasoned that experience in executing research was a necessary prerequisite for making intelligent decisions in this field. I spent one year in the traditional graduate track in this department before being selected as a fellow, and feel I can comment on the utility of each experience. Briefly, the fellowship program contains four elements which in my opinion are essential to adequate research training:

1. The opportunity to work closely with key faculty members who are partially freed from classroom and administrative responsiblities to discuss research-relevant problems with fellowship students. Without exception, all of the fellowship students have been welcomed by the faculty at any time during the work-day for discussions of research matters.

2. There has been an emphasis on extensive experience in on-going research projects. We often talk about the necessity of actual research experience for eventual success in defining the scope of this field, but all too often the graduate program ignores the need. My own research with Dr. Gavriel Salomon has been tremendously rewarding in this respect and many fellows have given me the indication that their experiences with other faculty members have been similarly useful.

3. There has been the chance for individual fellows to pursue their own research interests with adequate funds for supplies, equipment and travel provided by the fellowship. The number of studies undertaken by fellows on their own is evidence for this point.

4. The proximity of offices and interests has led to close association between students in the conceptualizing of research problems. Some of my most valuable insights in this past year have been gained from students during our weekly "lunch-bag" seminars and informal discussions. In addition, I have noticed that a number of fellows have assisted graduate students in the department in research projects for experience and in exchange for assistance on their own individual projects.

If I were asked to suggest one change in the program, it would be in the nature of an addition rather than a deletion. I would direct more fellowship resources toward attracting new and temporary (visiting) faculty members. It is necessary to remind ourselves occasionally that the university exists not only to educate students but to enrich the interests of its faculty and administration.

In essence, it appears to me that fellowship programs such as this are vital for developing an area such as ours. The techniques and ideas gained from our past experience with the program will insure the continued success of doctoral candidates in this department and, hopefully, contribute to a sharper delineation of relevant problems in the area of instructional technology and the ability of our graduates to come to grips with directing and planning research in instructional technology.

Sincerely,

Richard E. Clark

INDIANA UNIVERSITY
Audio-Visual Center
BLOOMINGTON, INDIANA 47401

Dear Professors Black and Jwaideh:

As a brief overview of the Research Fellowship program, there is little but praise that I can express concerning the faculty, curriculum, and research experience that I gained while in the program. I feel qualified to state this as I now hold a grant from USOE to carry on research with disadvantaged children, and the specific knowledge of research design, experimental methods and statistical analysis were gained by my participation in the fellowship program.

The course work developed for the program was such that it could be meaningful in both classroom material and my outside ongoing research. The research done was always under the guidance of some faculty member so that both poor and correct research methods were immediately detected and noted for me. One very reinforcing aspect of the program was the availability of funds for building experimental equipment and the cooperation that was given for the acquisition of such funds.

All in all, I believe the Research Fellowship Program to be an invaluable experience in training educational researchers.

Sincerely,

Solomon A. Eaglstein

SAE/lr

INDIANA UNIVERSITY
Audio-Visual Center
BLOOMINGTON INDIANA 47401

AREA CODE 812
TEL. 337-[illegible]

Dear Professor Black and Jwaideh:

As a research fellow in my last semester of course work, I have been asked to comment on my experiences in the Practicum phase of this program.

The two aspects of the practicum activities which have been of greatest value to me have been, first, the opportunity it has given me to participate in research on topics of interest to me, under the guidance of faculty members in the Research Department, and, secondly, the opportunity to work with faculty members and other trainees on the development of the research curriculum.

The areas in which I have been able to conduct research since joining the program have included the effects of reinforcement on recall, factors influencing cooperative escape and aggressive behavior, the effects of contingent vs. noncontingent grading on student performance, and generalization gradients following learning with and without errors.

In the Spring Semester of 1968, Dr. Black and I became involved in the revision of his course entitled "Survey of Audiovisual Communications--R546". Students who had taken the course previously had not demonstrated the scientific and methodological skills necessary for doing research work even though these same students performed well in the course. And, more importantly, the students did not express or demonstrate a continued interest in research. Therefore, it was decided that a more applied and practical research approach would be initiated.

The course was offered in the Summer and Fall of '68 and the Spring of '69. Student progress was closely monitored, thus providing feedback to the course designers as to the effectiveness of certain procedures and areas which might indicate necessary revisions. The results were encouraging, both in terms of student interest in further research and in terms of the data we obtained from the course. Part of these data have been sent to AERA for presentation at the annual convention in March, 1970. The paper is entitled "The Effect of Contingent vs. Non-contingent Grades on Student Performance."

The benefits of this work which have accrued to me personally are as follows:

1) The opportunity to teach students scientific skills. By presenting science as an enjoyable and interesting enterprise.

2) Acquiring practical experience in applying knowledge obtained from research.

3) Asking questions which require additional research in a more controlled situation; e.g., Under what conditions can generalized reinforcers such as grades become ineffective for maintaining behavior?

4) Writing and presenting research findings at a professional meeting, e.g., AERA.

The practicum phase of the program has indeed proved beneficial to me. Course material has become relevant and meaningful as a result of the experience.

Sincerely yours,

R. W. Taylor

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Audio-Visual Center
BLOOMINGTON, INDIANA 47401

AREA CODE 81[illegible]
TEL. NO. 11[illegible]

Dear Professors Black and Jwaideh:

The internship portion of our fellowship program was the important ingredient that shifted the emphasis from pure academics to research. This internship requirement allows the fellow to move progressively toward being an independent researcher. Unfortunately, the Ph.D. candidates in other areas here at Indiana often reach their dissertation with little or no knowledge of research and must search for a question to ask, while our fellows, who are better trained in research skills, tend to be ready to ask sound researchable questions and further to be able to answer these questions.

My own experiences with the internship program have been rewarding ones. My first semester in the program I worked with Dr. Black on problems related to channel communication, and through Dr. Black's guidance I was able to complete this project and present the findings at the annual meeting of DAVI. In the second and summer semesters of my first year as a fellow, I continued working with Dr. Black, but on a different problem. Dr. Black and I jointly developed the research area of "Variables affecting imagery instruction in children," and by the end of the summer (1968) I had completed a small grant proposal which was eventually funded by USOE.

The problem of imagery and its relation to Audio-Visual Communications has remained my major interest, and I have been fortunate enough to work with several other faculty members at I.U. on the development of this research area. My final semester as a fellow (i.e., before receiving my grant), I worked with Dr. Joan L. Prentice of the Department of Educational Psychology, and Dr. Prentice and Dr. Black were able to further help me develop my ideas and research questions.

I have been fortunate enough to be involved in all four steps of the sequential internship program as outlined by Dr. Black. The first two steps, joint research with a faculty member and independent research directed by a faculty member, are mentioned above. The final steps, that of directing the research of beginning students and designing, developing, and teaching new research courses have been of major interest to me since resinning my fellowship.

Where I proposed one major research study I was able to complete eight, and this was due mainly to Drs. Black and Prentice who suggested that their students work with me on my research. The result of this has been two major papers presented at conventions: "Variables affecting imagery instruction in children," which was presented with Dr. Black at the annual meeting of the Midwestern Psychological Association (May, 1969), and "Imagery Organization and Children's Recall," to be presented with Dr. Prentice and Marie Josberger at AERA (March, 1970).

I have become interested in the development of courses which would include this research internship component, and have been involved primarily with Dr. J. Q. Knowlton on this curriculum development project. The first of these new courses, involving a communications approach to learning, to be taught at an introductory level, is entitled "The learner, media, and research," and is currently being taught by Dr. Knowlton with the assistance of Richard Clark and myself.

With the return of Dr. Black in 1970, the lessons learned from the first three years of the program, the inclusion of new research-oriented faculty (Drs. Jwaideh, Cunningham, and Stowe), and the emphasis on research in particular areas (Diffusion and Adoption, Evaluation, and Instructional Development), I feel the internship training and the fellowship program can only become even better. Upon graduation I would strongly prefer teaching at an institution where a fellowship program such as this is in existence, and therefore would hope, for the benefit of research in education and the students and faculty of the Audio-Visual Center, that the current fellowship program be renewed.

Sincerely,

Arthur R. Taylor